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ABSTRACT

This review analyzes recent research on student personality, social and home environment, and the influence of these factors on academic achievement, particularly among minority and disadvantaged students. Several factors which purportedly affect student achievement and which are examined in the review include: (1) socioeconomic status and its various indicators; (2) the cognitive climate of the home; (3) family relationships (broken versus intact families); (4) family residential mobility; (5) student self-concept; and (6) other personality correlates of achievement, including achievement motivation and anxiety. Lack of standardization in methodology, terminology, size of samples, and instruments used for assessment inhibit broad generalizations of research conclusions in this survey. However, the review does suggest that student achievement is the complex result of many interrelated factors, of which ability is only one. In order to raise students' cognitive development, it is stated, educators must consider non-cognitive student variables such as pre-school experience, home environment, geographic transience, individual personality, parental involvement, socioeconomic status, race, sex, family size, and birth order and spacing. A bibliography is included. (Author/KR)

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# HOME ENVIRONMENT, SELF-CONCEPT AND URBAN STUDENT ACHIEVEMENT: A BIBLIOGRAPHY AND REVIEW OF RESEARCH

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WITH

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The Urban Education Observatory
New Jersey Department of Education

February, 1977

Carol Shapiro, during her Research Internship with the Urban Education Observatory, January-September, 1976, developed this bibliography, carried out the review, and wrote the initial draft of the report.

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February 16, 1977

Dear Urban Educators:

This publication of the Urban Education Observatory is part of a continuing effort on the behalf of the State Department of Education to assist Urban educators in creating more successful educational experiences for our urban students. The report focuses on two major factors which strongly interact with urban student achievement--"home environment" and "self-concept."

Many of us through our contact with students in urban education settings are vividly aware of the influence of these factors on student learning. For those educators this report will reinforce their knowledge and possibly inform them of the findings of the more recent research. For other educators, it will serve to create an awareness of the importance of these factors, and how they relate to student achievement. For both categories of educators, as well as those somewhere else along this continuum we hope it stimulates the utilization of this awareness and knowledge in the implementation of current educational programs. More significantly, it should promote the development of programs more sensitive to the influence of these factors and to the learning styles of urban youngsters.

It is our goal to continue to concentrate our energies and attention in researching and reporting the variables that directly affect the learning of urban children. In the future we hope to publish more, and improved documents that urban educators can use in improving the learning of each child in their schools.

Sincerely,

Gary Gappert
Assistant Commissioner

GG:adl

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## INTRODUCTION

This research review contains both a bibliography and a summary and analysis of the more recent research on student personality, and social and home environment, and the influence of these factors on student achievement. Moreover, it will focus on these factors as they affect minority and disadvantaged students.

Intellective measures such as aptitude test scores and previous school grades has long been used to determine a student's ability. They have, as well, been primary input into determining what is learned and the degree and means by which cognitive material is taught in American public schools. They remain the principal criteria for deciding instructional grouping, achievement prediction and curriculum focus in the schools. This situation exists, in part, because: this data has been relatively easy to obtain, there is a lack of knowledge of non-cognitive measures and how they affect student achievement, and in the past these measures have shown a high correlation with high school and college grades.

Among minority students, however, there is evidence (Thomas and Stanley, 1969; Miller and O'Connor, 1969; Temp, 1971) that they often defy what one would predict on the basis of aptitude test scores and past grades. If intellective measures are not significantly related to the academic performance of minority students, who generally do not perform well on aptitude tests, perhaps we should then look at non-cognitive characteristics of behavior. "Self-concept" or "level of aspiration of parental expectation" may be more strongly related to minority student achievement than aptitude test scores.

This survey and summary of the research examines these non-cognitive characteristics, which historically have been placed into two broad categories: "Student Personality Traits" and "Family or Home Environment". Unfortunately a project that would provide a comprehensive review and bibliography of all the factors that compose these two categories, and their effect on student achieve-

ment would require far greater resources than were at our disposal. We have thus limited our effort to a thorough investigation of several factors which purportedly affect student achievement.

These factors are: 1) Socioeconomic status (SES) and its various indicators, 2) the cognitive climate of the home, 3) family relationships (broken versus intact families), 4) family residential mobility, 5) student self-concept, and 6) other personality correlates of achievement, including achievement motivation and anxiety.

The reader should be cautioned against viewing either of these two broad categories, into which these six factors have been grouped, as either mutually exclusive or separate and distinct determinants of educational outcomes. Clearly they are not; they are broken down in the bibliography in this manner solely for investigative and reporting convenience. The choice and emphasis among topics is also not meant to imply that these factors are the only or most important determinants of student achievement. Separate planned research reports from the New Jersey Urban Education Observatory will explore the impact on student achievement of such factors as teacher characteristics and teacher behavior.

In short, this review should do three things for the reader: 1) it should convey a strong impression of the topical emphasis in recent educational research and also of the practical problems with methodology which have plagued this research; 2) it should summarize the major findings of research studies carried out in the two broad areas listed above; and 3) it should suggest the specific areas in this research which deserve attention from policy makers and which warrant more extensive examination by researchers.

## I. HOME ENVIRONMENT

The question, "To what extent does the home environment affect student achievement?" has led researchers down diverse avenues of investigation. One such avenue has been to investigate characteristics of the home and their effect on achievement level variations. "Socioeconomic status (SES) is considered a characteristic of the home environment. Indicators of SES include: parent education levels, parent occupation and income. Other characteristics of the home environment include: family size, father presence, birth order of children, and geographic mobility. In addition to investigating these characteristics, researchers, viewing the home as the initial learning environment and the emotional, attitudinal, and cognitive basis for later learning and development, have also examined home environment characteristics such as: the nature of the mother's verbal interaction with the pre-school child, reading background of parents; reading materials in the home; learning activities in the home directed at the pre-school child, i.e., counting and recitation of the ABC's, and time spent with the child in order to determine the possible effects these have on student achievement and attitude toward school.

Unfortunately, the bulk of the most recent research focuses on the indicators of SES, investigating and analyzing the relatively easily obtainable statistics which result in neat correlations, but yield limited utility for educational policy. Educational policy makers can do little to influence birth order, family size, father's occupation or social class. However, they can direct their energies toward behavioral changes through strategies of parental counselling for pre-school and school age children, and parental involvement in the school and their child's learning process. Nevertheless, this survey of research on the impact of home environment on student achievement reports the results of studies containing both more and less fruitful policy implications.

## I.A. SOCIOECONOMIC STATUS AND HOME ENVIRONMENT

### I.A.1 Socioeconomic Status (SES)

The "home environment" factor most commonly linked to levels of student achievement is SES. Researchers investigating the relationship between SES and student achievement in the past have consistently noted a correlation between the two variables; students from high SES backgrounds do better on standardized achievement tests and show higher mean grade point averages (GPA's) than do children from low SES backgrounds. Most recent research efforts find SES to be the most reliable predictive measure of student achievement(Averch ,1972).

Several recent studies consider the possibility that most low achievement test scores found in young children of low SES backgrounds stem from their reduced facility with reading and language and their lower verbal skills. Conceivably, standardized achievement tests which typically are heavily weighted in reading and verbal skills accentuate the low achievement of low SES students. Researchers therefore employed tests which were not culturally "loaded". The same result was still observed: low SES students scored lower than higher SES students.

Jones and Deblaissie(1971), in examining 547 seventh grade students in order to contrast the predictability of seventh grade student achievement for different social class groups (did not control for race), found "a significant ordering of mean scores on the Short Test of Educational Ability (STEA) from highest to lowest social class group". When the sexes were examined separately, the relationship was not significant for females. STEA was used specifically because of the absence of weight on reading skills. However, this lack of weight "did not have an appreciable effect on difference in social class mean scores" (p. 13).

In 1974 Jantz sampled 3,188 urban midwest sixth graders. Significant

differences in reading scores were found when students were grouped by SES, race, sex and IQ. Examining the mean reading scores he found: 1. females scored significantly higher than males; 2. whites scored significantly higher than non-whites; 3. high SES students scored significantly higher than low SES students; 4. students with higher IQ's scored significantly higher than students with low IQ's. In testing for "gains in performance" between fifth and sixth grade he found similar results; however, the difference between groups in performance gains were not significant (pp. 90-4).

Berg and Berg (1976) hypothesized that kindergartners from a middle SES school would score higher than kindergartners from a low SES school on verbal intelligence tests. They based their hypothesis on theories that middle SES students have a greater facility and exposure to language at an earlier age. They did not find evidence to support this. However, as is frequently the case in educational research, the sample was small. They examined only forty students, twenty from middle SES and twenty from low SES schools, ten black and ten white students from each SES and moreover they did not control for sex. Additionally, the researchers reveal in the end, that the middle SES school had recently undergone dramatic change in racial composition, and therefore might not have been a good example of "deeply established" middle income values which would be expected to show higher verbal ability scores.

As was often stated in the research reviewed, and as a prodrome for the research discussed throughout this review, it has been found to be difficult to draw any definitive conclusions regarding such relationships (SES and student achievement), other than to repeat the common cliches and generalities; i.e., higher SES students achieve higher in school. This difficulty exists basically for two reasons: first, not enough research has been done; secondly, much of the research that has been performed is marred by severe methodological limitations.

I.A.2 Parent Education and Occupation as a Correlate of Student Achievement

Parent education and occupation levels, considered indicators of SES, are frequently used as predictor variables in analysis of academic performance. Generally, parent education and occupation levels do correlate with student achievement. However, when minority group students are examined as a group, parent education levels do not prove to be especially good predictors of achievement. It should be noted that while studies find parent education and occupation levels correlating with student achievement it is not known why this occurs, or why it does not occur in all cases. Do parents with lower education levels have lower expectations and aspirations for their children? Is there less emphasis placed on academic achievement in homes where parents are either unemployed or have low skill jobs? These are the kinds of questions that would logically flow from studies on parent education and occupation levels; but this sort of analysis is notably absent from the research.

One interpretation of studies (Pafford and James, 1973) that evidence a relationship between parent education and student achievement is that the home learning experiences set the critical motivational and attitudinal framework for the child's school experience. If the child is exposed in the home to academic oriented material, ranging from reciting the ABC's to experimenting with chemistry, and feels "comfortable" with this experience, then he will be more confident, eager and consequently more successful in school. A possible implication of this research might be that parents who are themselves involved with academic subjects will, with minimal effort, provide a better learning environment in the home.

Pafford and James studied the relationship between the father's occupation and the child's science achievement in high school. Grouping eighty-four students into three categories by father's occupational status (college pro-

fessor, other professional and non-professional), they found that children of professionals: 1) take more high school science courses than do children of non-professionals, 2) that children of professionals do significantly better than children of non-professionals in science, but,3) when individual science courses are considered, the difference is significant only in biology. This last finding might be explained by the proportionately lower enrollment of children of non-professionals in more advanced science courses. Students who do not do well in biology are probably discouraged from taking more advanced courses, so the variation in parental occupation among these will not be as large.

Why children of non-professionals do less well initially in science is not addressed by the study. The study goes no farther than making the observation that the relationship between father occupation and science achievement exists for the high school students sampled in this study. The authors do suggest that the home environment of the "professional" provides the student with a greater affinity for science. This affinity for science may stem from the student exposure to science early in life, his or her emulation of the parents' occupation or by the parents' suggestion that science is a prestigious field of study, something to which the student of a professional should aspire. The student's motivation and interest are thus stimulated and the authors suggest that the student's proclivity to excel is enhanced.

Other studies, reviewed in more detail later in this report (Wolf, 1964; Shipman, unpublished manuscript; Krus and Rubin, 1974; Woloshin, 1974; Garber and Ware, 1972) reject the notion that high socioeconomic home environment alone is sufficient cause for higher student achievement. They assert that it is not simply the incidence of higher parent education or occupation levels that account for greater academic achievement, but rather more specific factors

such as: the amount of parental time spent with the child, the degree to which learning experiences are created in the home and the extent to which independent behavior is encouraged.

The extent to which these specific factors correlate with social class is not immediately apparent. Miller and Woock (1970) report that Wolf (1964) in comparing intelligence test scores of children from urban, rural and suburban schools, with a detailed analysis and rating of their home environments, which included amount of parental stress on achievement, parents' stress on language development, and parents' provisions for learning in the home (determined by interview with mother) found that "the relationship between the educational environment of the home and social class is very small" (p. 156). However, Miller and Woock point out that the lower-class child was underrepresented in the study. They argue that a better representation of lower-class children would have increased the correlation, but they also assert that "it is unlikely that the increase would have been substantial" (p. 156).

In addition to studying the effects of well educated parents vs. poorly educated parents on student achievement, Osborn (1971) sought to narrow the relationship still further and asked: "What is the impact of differing parental education levels (i.e., a mother with low education and a father with high education compared to the opposite combination) on achievement?" From a sample of 398 high school students, he found that:

1. there was a significant correlation between parental educational levels and student achievement. Students from LOW parent educated homes scored significantly lower than students from HIGH parent educated homes. (Achievement was measured by GPA and the Iowa Test of Educational Development);
2. there were no major differences in achievement between high mother-low father educated and high father-low mother educated groups;

3. students achieved in the direction of the educational levels of the like-sex parent;
4. in terms of "educational aspirations and expectations", students aspired and expected to achieve education levels in the direction of the education level of the like-sex parent (p. 167).

These results challenge the popularly held belief that the mother is the more powerful influence on her child's development. Thus, an educator might expect a student's pattern of achievement and aspiration to "fall in line" with the educational levels of the same sex parent.

Query and Kuruvilla (1975) support Osborn's finding that children achieve in the direction of the like sex parent. They find the nature of maternal occupation and education level to be of critical importance for the development of the adolescent female. Studying 225 white ninth grade boys and girls, 60% of which had working mothers, the study revealed that children of working mothers score higher (but not significantly higher) on achievement tests than children of non-working mothers. However, when the type of maternal employment was considered (that is, professional: teacher, nurse etc. versus non-professional: sales, clerical, etc.) a significant difference in achievement did occur, with girls of professional mothers scoring significantly higher than girls of non-professionals. This was true for girls only. The authors conclude from this analysis that while "the education and occupational level of the mother may have some positive bearings upon her adolescent son's academic performance . . . her level of education and occupation either taken separately or together, significantly affects her adolescent daughter" (pp. 353-6).

Given the often contradictory and immature status of the above research, few generalizable conclusions, other than those already made on the preceding pages, can be stated. Particularly, it cannot be implied from the studies that do document a relationship between average parent occupation and education levels

and average student achievement, that low income, low education and non-professional families do not raise bright, curious and achieving children.

### I.A.3 Minority Groups and the Predictive Value of SES, Parent Occupation and Education Levels

Although there is a general relationship between parent education and occupation and pupil achievement, some research indicates that these variables are not adequate predictors of achievement in minority group populations.

Woloshin (1974) reports conflicting results in studies which examined the relationship between parent occupation and education levels, and student achievement among minority students. She reviews studies which support the existence of a relationship between achievement and SES, as measured by parent education levels, as well as studies that refute it.

In reviewing Lloyd's study (1972) of black sixth graders, Woloshin reports that Lloyd found that neither the education level of the father or the mother was significantly related to the reading achievement for male and/or female students. Also, no significant relationship between occupational level of father and reading achievement was found, except in the case of high IQ females where a significant relationship between father's and mother's education level and achievement was noted (p. 14).

In a similar study, Wasserman (1972) reported that the education level of the mother was not related to school grades of a group of black boys ranging grades from three to ten (p. 14).

In reviewing studies that report a relationship between student achievement and SES characteristics, Woloshin cites the work of Greenberg and Davidson (1972), who found that parents of high achieving students had a significantly better than average occupational level than parents of low achievers (p. 14).

In an attempt to explain the disparity of research evidence cited, Woloshin suggests that the inability to utilize SES as a variable to predict achievement accurately in minority students populations might be the result of the research samples, which represented too narrow an income range. SES as a gross measure across entire populations does significantly correlate with achievement levels. But as the range of income in the sample narrows, as it does when low-income and middle income minority groups are examined, the predictive ability of SES appears to decrease.

The disparity of results, some suggesting a significant relationship between achievement and parent education/occupation levels and others suggesting a non-significant relationship makes it difficult to draw hard and fast conclusions. Drawing comparisons between the studies itself is difficult since there is no uniformity of variables in these studies. Age, grade, size and relative homogeneity of the sample populations varied, as did the measures of achievement (GPA, standardized scores, reading levels). For example, while Wasserman failed to find a relationship between the third grade reading levels of elementary school students and parent education, Osborn found a significant correlation between GPA of high school students and parent education levels.

Clearly, one danger in trying to generalize from such dissimilar studies is the possibility of overlooking entirely plausible conclusions, such as: achievement in high school correlates with parent education levels, but achievement in lower grades does not.

### I.A.4 SES and Its Characteristics

Research conducted on the socioeconomic aspects of home and family environment has provided us with some hypotheses, general relationships and insight into factors that affect academic achievement. However, the information which can be drawn from this research is really very limited.

We know that socioeconomic status, as a gross measure, is a reliable indicator of school achievement. Children from low socioeconomic backgrounds, as a group, score lower on achievement tests and earn lower GPA's than those from high socioeconomic backgrounds. However, we also know that within any socioeconomic group there is a wide diversity in levels of achievement, motivation and self-concept. Achievement is not determined by social class anymore than child raising practices are uniform across economic or social class groups. Rather, SES is an indicator, an aggregate predictive variable at a statistical level. SES does not cause poor achievement, nor does it serve as a particularly useful diagnostic tool for the educator attempting to design educational programs in response to poor student achievement.

The value of studies which document the correlation between low achievement and low SES (and there is an abundance of them) has been that they lay the groundwork for determining the effect home environments have upon student achievement. More meaningful empirical and policy-directed research should consequently pick up where these studies leave off and go beyond the simple correlation between social class and achievement. The research should focus on what factors present in lower socioeconomic households and in classrooms predominantly populated by low socioeconomic students are responsible for differences in achievement within that group. This means going past correlation studies that depict a relationship between parent occupation and/or education levels and student achievement, and searching for more revealing characteristics of the home and classroom environment that appear to influence and determine academic achievement.

This kind of data would be the product of empirically oriented research, which would reveal information of greater utility for policy making than the overwhelming mass of research which correlates social class and student achievement, offering the educator few alternatives for improving academic performance,

save by raising student social class or parent occupation levels. Moreover, all too frequently the educational community itself uses low SES as an excuse or alibi for poor academic performance. Instead of working to develop, adopt and implement educational programs which can improve the achievement of children from low SES backgrounds, educators "too comfortably" correlate low SES and low student achievement.

Unfortunately, only a relatively limited number of studies of home environment have gone beyond the preoccupation with family socioeconomic status. Our search of recent research has produced only a handful of studies which explore this complex environment. The studies we have found strongly suggest that the pre-school home environment contributes greatly to later student achievement. Not only is the home environment essential to the development of personality and attitudes toward school, but the activities that occur in the home, even the most rudimentary ones such as, counting, reciting ABC's and reading to the child, may be critical to the establishment of a foundation for school learning. These activities are important enough that they can significantly predict later school achievement.

A longitudinal study conducted by Krus and Rubin (1974) of a group of 1,206 five year olds from varied backgrounds attempted to determine which variables of the pre-school home environment are related to student achievement at ages five, six and seven. Characteristics of the home were related to achievement variability with controls introduced for influence of SES.

Five major "family history" factors were found to be significantly correlated with student achievement. These were:

1. Mother's reading ability, i.e., mother's reading scores and mother's enjoyment of reading;
2. Father's reading ability;
3. Reading material in home, i.e., encyclopedia, dictionary, newspapers and magazines;

4. School related activities of a five year old, i.e., prints name, counts to twenty, recites ABC's, identifies colors, ties shoes;

5. Child's reading background, i.e., did child read at age two and a half? Look at books by himself at age five? How frequently did the child look at books? How often was the child read to at two and a half years?

Of the five major "family history" factors, three were highly dependent upon SES. These were: mother's reading background, father's reading background and presence of reading materials in the home. Factors that were independent of SES included the five year old child's school related activities and the young child's reading background. Hence, regardless of SES, students who came from homes where these activities were fostered, achieved higher scores on standardized achievement tests than those who did not.

This study provides evidence that children who come from homes where they are exposed to books at an early age, and where there exists a model for reading behavior, have a definite advantage over students who come from homes where no such model exists and where there is no access to reading materials in the home. Interestingly, home environment factors that showed little relation to education achievement were: parental agreement about child-rearing practices, breakfast regimen, child's television viewing habits, and age of earliest home responsibilities.

As in the Krus and Rubin study, which identified family history data as having greater predictive ability for student educational functioning than SES, Sheldon, et al., (1972) found that parents' "ability to attend (ATA)" to children when combined with a general social class variable, was a successful predictor of IQ. Ability to attend to children was seen as a function of family size, father presence, and a rating of the neighborhood (population density and overcrowding). Very interestingly, Sheldon, et al., found that when race was added to the regression analysis using ATA and social class variables, the predictive value was not significantly increased.

It is interesting to note that studies conducted in the early 1960's did attempt to ferret out those home or family characteristics that explain resultant achievement levels. Although these factors are statistically more difficult to quantify and thus are susceptible to more intense questions of reliability and observer or interviewer bias, these studies, as reviewed by Gordon (1968) conclude that it is not so much a question of the SES of the family, but rather the "family's interactive behavior" and the "cognitive climate of the home". Wolf (1964), for example, found in a survey of sixty fifth graders that the best predictors of intelligence were not social class and parent education levels but rather:

1. parental expectation for intellectual achievement,
2. the amount of information the mother had on the child's intellectual development,
3. opportunities provided for enlarging the child's vocabulary,
4. the extent to which parents created situations for learning in the home,
5. the extent of assistance in learning situations related to scholastic and non-school activities.

In this study at least two-thirds of the variation in academic achievement was explained by such measures of family environment.

Gordon (1968) in a follow-up study to the research of Hess and Shipman (1965) on the effect of interactive behavior investigated the relationship between the mother's language and the cognitive development of 160 black four year old children. Gordon found a relationship between maternal cognitive style as measured by the Sigel Test and child style and performance. He concluded "that the lack of cognitive meaning in the mother-child relationship is a central factor contributing to the problem of the 'culturally disadvantaged' child".

In another study which also noted the importance of parent-child interactive behavior, Garber and Ware (1972) found that the most reliable variables

for predicting school achievement for sixty seven pre-school head start children were:

1. the type of cognitively-oriented materials in the home, and
2. the range of interactive processes between parent and child, i.e., the parents' awareness of child's development, rewards for intellectual achievement, expectations for child's schooling and reading pressure.

Garber and Ware concluded as did previous studies, that home centered activities which enhance interactive relationships between parent and child may increase school success. They also found that the nature of the home environment varies substantially among low income families.

Indeed, the research on "family interactive behavior" and "cognitive climate of the home" clearly suggests that the parents' child-rearing practices play an enormous role in the future academic performance of their children. In addition to their direct effect on academic performance, parents also have considerable influence on their child's educational goals (Kerckhoff and Huff, 1974). They found that this relationship existed regardless of the quality or the closeness of the parent-child relationship. In response to the earlier research on child socialization which suggests that the closer the parent-child relationship the greater the influence parents' goals have on their childrens' goals, Kerckhoff and Huff studied ninth and twelfth grade white boys. Some of the factors examined were:

1. parent respect for the child's ideas,
2. parental feelings of closeness to the child,
3. frequency with which parent and child engage in common activities,
4. frequency of conversation on issues of mutual interest,
5. whether parents explain their rules and decisions to the child.

They found no consistent relationship between any measure of parent-child relationship quality and any measure of agreement between educational goals.

Their findings corroborate the earlier conclusions of Lesser (1969) and Sandis (1970).

In the same study Kerckhoff and Huff also investigated whether parental influence on goal setting increases or decreases in relationship to the child's age. Citing the Coleman Equality Educational Opportunity Study (1965) and other studies that report decreasing parent influence with age, they found that transmission of goals from parent to child is stronger in older boys.

The effect of the home environment on educational performance has prompted educational researchers to focus on the possible causes in the home of low student achievement. They have begun to investigate parental attitudes, the goals they foster and the home learning environment. They argue that educating parents to instill positive self-concepts, achievement motivation, and basic skills in their children, as well as increasing the opportunity for learning in the home might go a long way towards increasing academic potential of youngsters. If nothing else, it would serve to support and reinforce the formal educational process of the school.

A method frequently suggested for bringing the activities of school and home closer together is "parent counselling" - - having psychologists or educators consult with parents in order to involve them and keep them abreast of their child's education, and to teach them ways of modifying their child's behavior. Several cases have shown parent counselling to be an effective method of boosting low student achievement. [See Gordon (1968) for detailed discussion and documentation of parental involvement programs]. There is, however, some question of whether achievement levels of students are maintained after parent counselling is terminated. Brookover, et al., (1967) report that after counselling has ceased, in some cases the student regressed to the low achieving behavior. However, few longitudinal studies have evaluated the long term effects.

One project developed in Massachusetts (Pigott, 1969) attempted to raise achievement levels of underachieving elementary, junior high and high school students through weekly consultation with parents. During these sessions parents were trained, without their child's or the child's teachers' knowledge, to use praise and rewards in order to reinforce positive academic behavior. Although the population was a socially and economically homogenous group residing in a wealthy suburb of Boston, the successful outcome of the counselling suggests that this technique may be applicable to other groups. Students who were previously lazy, unmotivated, uncooperative, disrespectful and earned mediocre grades evidenced complete revisions in personality and grades in a matter of weeks.

Another "home-aid" approach to raising academic achievement is proposed by White (1975), who views the first three years of a child's life as the period in which successful patterns for learning are developed, and upon which future achievement depends. He suggests that all children could benefit from a more consciously planned approach to child raising; one that would ensure a solid educational foundation. The approach he outlines to facilitate greater parental awareness and effectiveness in child-rearing practices is:

1. make child-rearing, and fundamentals about child development a required course in high school;
2. use television to transmit this information in an entertaining and informative way into the home;
3. provide resource centers (with capacity for lending books, providing professional consultation, etc.) and home visiting programs which aim at family learning, in order not to bypass the family or educate the child in an institutional vacuum;
4. provide a one-day-a-week baby sitting service to relieve the mother of the intense pressures and responsibilities of child raising.

White's approach and similar "home-aid" approaches have received harsh criticism for being insensitive to the severe problems of large, low-income families, and for being too simplistic in their comprehension of the assistance

these families require in ameliorating their problems. While facilitating parental involvement in student education is undoubtedly desirable (Coleman, 1966; Jencks, et al., 1972), emphasis on radical home intervention or home environment programs as the primary means of improving student school performance have been opposed on several counts.

1. Such an approach shifts the responsibility for low student performance from the school to the home. Critics cite the research which finds high student expectations, and self-concept upon initial school entry, regardless of social class. But expectations and self-concept drop dramatically by the third grade, implying that the school rather than the home discourages and frustrates young learners. Therefore, such an approach would appear to have a misplaced emphasis.
2. Attempts to modify the home and cognitive environment might indeed be well intentioned. But when such attempts are compared to the harsh problems that pervade low income environments (e.g., chronic unemployment, sub-standard housing, poor health), they may not measure up to the severity of these problems.
3. Although low SES students would benefit from increased verbal stimulation at an early age, the competing demands placed on the low income mother's time may all but preclude such luxuries as reading extensively to the child, or becoming herself a model for reading behavior by cultivating a variety of literacy materials in the home.

Thus, some of the suggested approaches and strategies for intervention in the home, while addressing one aspect of the problem of low achievement, fail to grasp the totality, severity and complexity of the problems that confront large, low SES families, and may therefore be overwhelmed by these environmental factors.

## I.B. FAMILY RELATIONSHIPS: BROKEN VERSUS INTACT FAMILIES

All but the most recent research, Sciara (1975), which we have reviewed on broken and intact families, support the earlier findings of Coleman (1966) and others - - that there is no significant relationship between family "intactness" and achievement.

In support of Coleman, Solomon, et. al., (1972) in studying 149 fifth grade urban black ghetto children found no significant effects of "parental arrangement" on student achievement. Using four categories of parental arrangement: 1. both parents present, 2. mother and step-father present, 3. mother only present, and 4. others present - - grandparents, foster parents and a composite measure of achievement (based on fourth and fifth grade marks and standardized achievement test scores), the researchers did not find any significant differences in achievement. Solomon, et al.,(1973) examined 117 lower class black male students between the ages of ten and sixteen who resided in a lower income housing development. The researchers made a determined effort to hold sex, SES, race, housing type, and location constant in order to highlight the significance of the family's internal structure and its effect on achievement.

One of the merits of this study was that clearly defined categories were used to describe family relationships. A criticism frequently launched at this area of research is that there is an absence of controls for SES and the type of father absence. Here, the father absent category is defined as "absence of the boy's natural father as a result of marital disruption without any male replacement during the most recent three year period (p. 462). Other categories were dropped for the purpose of this analysis. The categories were: father present, N=45, and father absence, N=46.

The researchers also constructed a school achievement index based on a) mean school grades in five major subjects, and b) a "factor" which reflected

whether the student was in the appropriate grade for his age. The research found that:

1. there is no significant difference in achievement between intact and broken homes, and that
2. "at each level within the range of school achievement, boys from broken and complete families are closely matched" (p. 464).

The study thus concludes that father absence does not effect student achievement at any level of education.

The most recent study by Sciara (1975), examined the effect of father absence on the educational achievement of black fourth graders enrolled in eight Model Cities schools in a midwestern metropolitan school system. It found significant differences in achievement when comparing boys and girls from father-present homes with boys and girls from father-absent homes.

This study, however, should be treated cautiously. The author admits that SES was only "loosely" controlled, i.e., the sample was restricted to inner city schools located in low income areas. It is possible that the achievement differences revealed in this study which are attributed to father absence were in fact due to differences in SES. This is of particular importance when one considers that "the Bureau of the Census and the Bureau of Labor Statistics have noted that the income level of father absent homes is much lower than those from father present homes" (p. 52). Also, Sciara does not consider the type of father absence.

The bulk of research does not however support Sciara's results nor the notion that children from broken homes do less well in school when compared to children from intact families. Woloshin's (1974) review of the research cites numerous cases to this effect. She argues that this is a logical result, if one views the quality of the home experience as being of greater importance than the number of parents present.

Unfortunately, much of the research which has been done in this area fails

to consider a number of variables which might influence the effect of father absence on children's achievement. Many studies fail to consider the length of time that the family structure has been broken. Perhaps after a period of time the effect of father absence disappears. Other studies fail to consider the age of the child at the time of family breakup (Woloshin, 1974:12). While father absence might have a profuund effect on one age group, it might not have an effect on another age group. Still other studies fail to indicate whether or not a surrogate parent, i.e., aunt, uncle, grandparent, or foster parent exists. Finally, some studies fail to control adequately for SES.

Thus, while the weight of the evidence suggests that father absence does not affect achievement significantly, some shortcomings in the research do not allow us to say so unequivocally.

## I.C. RESIDENTIAL MOBILITY: IT'S EFFECT ON STUDENT ACHIEVEMENT

1970 Census data shows that 47% of the urban households in New Jersey (as compared to 42.4% of households throughout the state) lived in a different house in 1965. Many of those households, no doubt, made more than one move during those five years, and with the highest proportion of rental housing in urban, as opposed to suburban areas, the differences in mobility between urban and suburban households is likely to be even greater than that indicated in the census figures.

Logically, it would seem that some of the low achievement evidenced in urban areas might be directly related to frequent residential moves, and the resulting discontinuity in education which such changes imply.

Searching the educational research for documentation of some relationship between achievement and residential mobility, we were disappointed to find a paucity of recent research on this topic. Nevertheless, we did find some research

conducted in the mid 1960's which clearly suggests the need for further research.

In reviewing the data on pupil transience in the borough of Manhattan, New York City, Miller and Woock observe that the number of students described as transients, students who did not remain in the same school during the course of one school year, to be as high as 100% in three urban schools. Of the ninety-one elementary schools in Manhattan, sixty-six schools evidenced between 90% and 99% transiency rates (p.104). Surely a transiency rate of this proportion not only creates social, psychological and learning problems for the individual student, but also creates additional organizational, economic and psychological hardships for the school.

Miller and Woock, in reviewing another study (Justman, 1965), which also took place in Manhattan, New York City, studied the effect of the frequency of residential moves upon achievement. The study found that the reading levels of urban disadvantaged elementary school students who were subject to more than one change in schools during their educational career were significantly lower than those reading grades of students who remained in the same school (p. 105).

Miller and Woock point out that while it is logical to assume that frequent residential moves would have a negative effect on achievement in all students, they have found this to be the case only in lower income children. They claim that "numerous studies of transiency in populations that are middle class, or where class was not isolated as a variable show no ill effects from a greater number of moves" (p. 101). One must therefore consider that low achievement evidenced in low income highly mobile children is perhaps not so much a function of their high mobility as it is their high mobility compounded by problems of poverty. Urban lower class parents subject to frequent moves conceivably have less time to tend to each child's individual psychological needs and problems associated with adjusting to a new school environment, than do middle class, financially secure and reasonably stable parents.

A more recent study, Whalen and Fried (1973) found no SES and mobility interaction with achievement. It should be noted however that Whalen and Fried studied the effect of mobility on the suburban student, and not the inner-city student. This might account for the failure of their study to find those differences in achievement reported by Miller and Woock. They defined a high level of geographic mobility as students who had inhabited four or more cities during their educational careers; and low mobility characterizing those students who had resided within the same suburb for their entire education. Their research reported:

1. high mobility students of high intelligence had higher achievement scores than low-mobility students of high intelligence,
2. high mobility students of low intelligence had lower achievement scores than low mobility students of low intelligence,
3. there was no significant difference between high and low SES students, and no significant interaction of SES with either mobility or intelligence (although sex was not controlled for).

From this third finding, Whalen and Fried conclude that students of high SES with high mobility do not have higher achievement scores than students of high SES with low mobility; nor do students of low SES with high mobility have lower achievement scores than students of low SES with low mobility. The researchers do state that while generalizations cannot be made based on a single exploratory study, "a relationship does exist between mobility and achievement", and that "it is possible that the interests and attitudes of higher intelligence students are stimulated by more frequent geographic relocations" (p. 165).

While the Whalen and Fried study does begin to explore the relationship between mobility and achievement, for our purposes, the research would have to consider the effect of frequent moves within an urban area, and particularly its effect on the learning and development of the low-income inner-city student.

In conclusion, research on the effect of residential mobility on urban school children indicates that there is a high degree of urban residential

mobility, and suggests this constitutes a grave, although unaddressed problem for the highly mobile lower income inner city student (Justman,in Miller and Woock, 1970). The fact that geographic moves by middle income students do not similarly result in achievement decline suggests that low income students need extra help adjusting to the new school environment. At the same time, educators must keep in mind that high residential mobility may also be a symptom of other educational problems facing the urban child. Perhaps, high mobility results from the parents' search for employment. The stress stemming from chronic unemployment and associated economic problems may itself be a source of poor academic performance, only compounded by frequent school moves.

Still, there is a strong possibility that the low achievement levels of lower SES students could be improved by giving greater attention to the individual needs of the high mobility inner-city student. This suggests that New Jersey should:

1. document the degree of student mobility in urban school districts;
2. attempt to determine the effect of this mobility on the learning development and achievement of low and middle income students;
3. where needed, design programs to identify high mobility students and to assist them with school transitions;
4. where mobility is a substantial problem, identify and encourage adoption of school district policies which could reduce the problems created by high mobility, e.g., flexible school attendance boundaries which would permit students to complete the school year in one school even though their residences may have changed.

## I.D. BIRTH ORDER AND FAMILY SIZE: THEIR EFFECT ON ACHIEVEMENT

Within the general topic of "Home Environment", the subject that has received the most attention from researchers is the relationship between birth order, family size and various measures of achievement. It is unclear why so much research effort has been devoted to this relationship, except perhaps that the data are readily available. This review will summarize the findings of

several of the more recent studies in this area, especially as they relate to urban students.

However, it is of primary importance that the reader be aware that much of the research in this area has a number of shortcomings which limit the applicability of its conclusions.

1. Some studies did not control for SES, but merely correlated family size, and/or birth order, with achievement. Hence, it is virtually impossible to tell whether a correlation showing relationship between large families and low student achievement actually reflects the effect of the family size or SES on achievement.

2. Other studies examined the relationship between birth order and achievement but failed to take into account the effect of family size, even though it has been shown that the effect of birth order on achievement is influenced by family size, i.e., last born from large and small families are affected differently by their position in the family.

3. Still other studies that do take family size into account differentiate only between first born and "later" born children, thereby limiting attempts to compare results with studies that differentiate between first and last born children.

4. Some evidence suggests that all family size and birth order studies are misleading unless "spacing" of children is considered in the analysis. At least one study suggested that the negative effects of large family size on individual academic achievement may not appear if the children are spaced at least three years apart. Unfortunately, very few studies do consider spacing.

5. Finally, a large number of studies in the birth order literature conclude that first born children have superior intelligence or ability because they find first born children" over represented among men of great achievement" and "over represented as student of universities, medical schools and graduate

schools" (Adams and Phillips, 1972:156). This is rather superficial evidence for the superior intellect of first born children, since it is traditional for families in western cultures to give first born, especially first born males, the first opportunity at the family inheritance and an education.

Adams and Phillips hypothesized that greater achievement of the first born child was due to higher levels of motivation. Sampling 135 first born, and 235 later born students from diverse SES and racial groups, they constructed a school-motivation scale which drew on teachers' assessment of the students' motivation in the fall and spring of two consecutive school years.

The results showed no significant interaction between birth order and socioeconomic and racial-ethnic groupings (four groups: middle-class Anglo, lower-class Anglo, lower-class Mexican and lower-class black). The difference found between first born and later born children was constant across the groups (p. 159). First born children did receive significantly higher scores than later born on standardized achievement variables; but, when differences in levels of motivation were controlled, the achievement differences between first born and later born children disappeared (p. 161). This finding suggests the difference in motivation between first and later born children is responsible for differences in achievement. In conclusion, Adams and Philips proposes that it would be of value to explore the benefit of early achievement motivation training for parents and later born students.

Adams and Phillips' findings conflict with studies that show first born in large, low SES families to be significantly less academically motivated than later born children. Rosen (1960), for example, found in a study of 427 boys residing in four northeastern states that achievement motivation scores of the first born child in lower class families were lower than the youngest and the intermediate children. In middle class families, the first born children score higher than intermediate and youngest children, except in small families where

the scores for the youngest is "negligibly" higher (p. 583). Rosen suggests that the role of the eldest child in a large low-income family is one primarily of aiding the parents in child-caring, and that this activity is not one which fosters high academic achievement motivation.

The differing results of Rosen, and Adams and Philips illustrates the problem of trying to explain achievement by birth order without considering SES, and family size. Obviously birth order, family size and SES must be considered and/or controlled for in order to explore their independent effect on student achievement. Research which continues to study the impact of only one variable, and fails to control for the others will continue to offer inconclusive and/or contradictory findings.

Two other studies which offer contrasting conclusions regarding birth order and family size and its effect on achievement are Solomon, et al., (1970), and Oberlander (1970).

Solomon, et al., studied 149 black, urban ghetto fifth grade students and found significant birth order and family size interactions when general academic achievement was considered. Achievement was measured by an assortment of individual achievement tests. They found that first born children scored significantly higher than last born children in small families; last born children scored higher than first born children in intermediate sized families; but in large families there was no significant difference in achievement by birth order.

Oberlander also found a significant birth order and family size interaction. But in contrast to Solomon, et al., he found that first born children not only score significantly better than children in other birth positions, but do so INCREASINGLY in larger families. In other words, as family size decreases, so does the relative superiority of first born to later born children.

Perhaps the disparity in results can be attributed to drastically different samples. Oberlander drew his sample from a relatively homogenous Chicago suburb,

and Solomon, et al., drew theirs from a Chicago inner-city ghetto. In any case, a plausible argument could be made for either outcome: first born children could do best increasingly in larger families because of increased responsibility at an earlier age and more time spent with the parent; or first born children might not do better in larger families because the emphasis is placed instead upon child care and sibling responsibilities.

In another study, Breland (1974) suggests that it is neither family size nor birth order alone that accounts for the differences in achievement, but rather these factors taken together with the spacing of the children. Studying two samples of National Merit Scholarship participants totalling 800,000 students, his significant findings were:

1. first born children from small families had the highest scores;
2. first born children from large families had the lowest scores.

These results were not attributable to either father's education, mother's education, family income or mother's age. Sibling spacing was, however, found to have an effect.

> "Where a sibling followed closely in age (2 years or less) the scores were depressed, but where the age spacing interval was for (3 years or more) the same score depression did not occur" (p. 1014)

Interestingly, the primary source of score differences occurred in the verbal portion of the test. This led Breland to argue that differences in achievement, as measured by the National Merit Scholarship Qualifying Test are attributable to environmental causes since "neither physiological theories nor economic theories would explain differences in verbal achievement but not in nonverbal achievement (p.1015).

Two separate studies, one utilizing a white population, Scott and Seifelt (1974) and the other a black population, Scott and Kobes (1974) examined the pre-school readiness of fifty pairs of disadvantaged low SES two to three year olds from large and small families, (large was three or more siblings; small was one or no siblings).

In the study of white pre-schoolers they found that children from small families scored higher in each of nine skill areas as measured by the Iowa Test of Preschool Development. However, the difference between students from large and small families was statistically significant in "expressive language". Only children from both large and small families scored low in receptive and expressive concepts, "suggesting that low SES whites irrespective of family size may profit from early enrichment in the acquisition of (receptive and expressive) concepts" (p. 4). Hence, the study suggests that the first classroom teachers of poor children should:

1. "promote children's success or learning tasks which utilize receptive language...," and
2. "be prepared to help children successfully bridge the gap which separates competence in receptive and expressive language" (p. 5).

Scott and Kobes (1974) in their parallel study of low SES pre-school blacks hypothesized that the "intra-family dynamics of low SES blacks might depress the learning of preschoolers". Examining seventy students divided equally between large and small families, their results showed that students from small black families significantly out-performed students from large black families in expressive language, visual memory and expressive concepts.

Thus, regardless of race, these two studies conclude that pre-school children from low SES large families are at somewhat of a disadvantage to those of small families; but all of the low socioeconomic status students, regardless of race or family size, scored low on measures of verbal ability and therefore might consequently benefit from remedial attention.

At least one study by Breland (1974) did find that first born children from small families score highest on achievement tests, and that first born children from large families score lowest. The differences in achievement were attributed to the "spacing" of the children. This led Breland to postulate that when children from large families are spaced three or more years apart they

do not evidence depression in achievement scores that would otherwise be expected.

Perhaps Breland does give us a clue as to a cause of difference in achievement of students from various ordinal birth positions and family size. His work states that it is the spacing of children in the family, not the number of children, nor the income level of the family which has the greatest influence on student achievement. This suggests a relationship between the amount of individual parental attention children receive and their achievement; with children from widely spaced families likely to receive more attention and thus consequently perform better in school.

The research on birth order, family size, SES and student achievement appears to be only on the threshold of exploring and identifying the relationships that exist among these variables. Hence, at this time, we can only tentatively recognize some of the reported conclusions from this research.

1. Black and white low SES pre-schoolers from large and small families, when examined, had low overall scores on standardized achievement tests.

2. Among low income black and white families, pre-school children from small families score higher on standardized achievement tests than low income black and white families from larger families.

3. Birth order is closely interrelated with family size and SES in affecting student achievement; first born children most commonly scoring higher than their siblings.

4. As family size increases in low income families the "achievement motivation" of the eldest child declines.

5. The spacing of children in a family does have an effect on student achievement.

In recognizing the potential importance of this last finding, educators might take special pains to insure that parents of large, closely spaced families consider the potential benefit to be derived from increased parental involvement in their children's learning activities and of the need to optimize the amount of individual attention the child receives in the home.

## II. STUDENT PERSONALITY AND SELF-CONCEPT

### II.A. INTRODUCTION

Personality is a many faceted construct, with diverse conceptions as to its composition. As evidenced in the literature there is no agreed upon demarcation of the study of this social-psychological phenomenon as it interacts with student achievement. As theorized in the literature, this social-psychological phenomenon affects, and conversely is affected by student achievement. This report will not attempt to review this global concept and its relationship to student achievement. It will focus on one of its variables--"self-concept", which has been the subject of many treatise and numerous investigations, as well as consider some of the research on motivation for achievement.

Non-cognitive behavioral characteristics, i.e., motivation, attitudes, self-concept, self-awareness, etc., are receiving an increasing amount of attention from educational practitioners and researchers, as both student characteristics affecting learning and as outcomes of the learning process. This has evolved, in part, in an attempt to comprehend and improve the educational processes, particularly for low achieving students.

As outcomes, non-cognitive factors are becoming increasingly significant in light of the evidence which shows a low correlation between cognitive achievement, as measured by GPA's and standardized tests, and later life success. Gintis (1971) and Holtzman (1971) cite evidence indicating that achievement in terms of job, social class and general life expectations is apparently only incidently related to school achievement. Evidence does exist that shows a high correlation between the amount of education and income one receives, but there is also increasing amounts of evidence that this relationship results from factors unrelated to the content of education (Berg, 1970). By and large, however, the non-cognitive or affective outcomes of school remain unexplored.

Much of the reform literature of Holt (1967), Goodman (1970), Silberman (1970), Illich (1971), and Kozol (1972), using personal experiences and descriptive research methods, states that the most vital outcome of the schools is the way in which the school experience affects the students' lives and self-concepts.

As student contribution to the educational process, these non-cognitive variables of personality, in the broadest sense, have been found to be significantly and positively related to achievement (Levition, 1975:42). Specifically, the bulk of research exploring the relationship of self-concept and achievement has reported that children having high self-concepts generally achieve higher grades than children with low self-concepts; children with low self-concepts have rarely performed well in school. The relationship between self-concept and achievement is more complex than this simple correlation reveals, particularly when factors such as ethnicity and sex are examined. We should, however, preface the review of the research on this relationship with some evaluative comments of the quality of the studies, and the prevalent problems of design and methodology.

## II.B METHODOLOGICAL, DESIGN, DEFINITION AND INSTRUMENTATION PROBLEMS IN THE SELF-CONCEPT RESEARCH

While most studies do reveal a correlation between self-concept and achievement, there is an absence of standardization in methodology, terminology, size of sample, and instrumentation used to assess self-concept. In 1961, Wylie critiqued the research of self-concept stating that there is a "bewildering array of definitions, instruments and research designs" (p. 2). This condition is evidenced as well in the more recent research.

We counted a minimum of fifteen commonly cited definitions of self-concept in the research studies reviewed. Several other definitions were implicit in the various instruments used and in the design of the studies. Moreover, there appears to be an overlap of terms, e.g., self-concept of ability, self-esteem, self-image, self-perception, and self report were used to depict the same or similar personality characteristics. This overlapping and interchanging of definitions, and inability to conceptualize and standardize a single operational definition of self-concept, has inhibited our ability to make generalizations across studies and interpret their results in the context of the theories in the self-concept literature.

Coller (1970) attempted to develop an operational definition for self-concept, through an investigation of the instrumentation used to measure this variable. After having reviewed fifty self-concept instruments, he disdainfully concluded that "testing objectives of the instruments are so divergent that self-concept must, in general, be defined operationally as the construct, or set thereof, assessed by the set of self-concept instruments" (p. 68). Thus the lack of precision in defining self-concept is reflected in the lack of effective measuring instruments.

Zirkel (1971:217) in reviewing the literature quotes Kubiniee, who stated, "the same instruments are employed to measure different self-constructs and

the same constructs are measured by different instruments." He also cites Stanwyck and Felker, who concluded that self-concept results were "useless without knowledge of the instruments used for the measurement and the definition of self-concept from which the instrument was derived."

Most contemporary theorists define self-concept either as a group of psychological processes that govern behavior and adjustment, and/or sociologically as an organized collection of attitudes, beliefs, and feelings a person has about himself in relation to his environment.

Coller offers a sociological definition of self-concept. He defines it as: "a multi-dimensional construct which covers and includes the total range of one's perceptions and evaluations of himself" (p. 68). His intent is to clarify that self-concept should not be viewed as a unitary trait, but rather a "generic term for a set of concepts of self that involves aspects of self-evaluation and/or self-description", which one perceives from his or her social system.

A similar approach to Coller's social systems definition developed within a psychoanalytic framework is found in the psychological literature. Levinson (1976:12), in viewing personality as a dynamic construct states that: "Self-esteem (self-concept) is reflected in the gap between the ego ideal and the self-image, or one's view of how things are in the present." Thus, it could be implied that if everything a child did was fed back to him as bad and he was constantly reminded of his inadequacies, his picture (self-concept) of himself is hardly likely to be one of a worthwhile, good person.

The "ego ideal" is our image of ourselves at our future best. It is a "lifetime road map...A person's wish to meet the demands of his own ego ideal, to be able to like himself, is the most powerful of all motivational forces" (Levinson, 1976:12). It is theorized that the ego ideal is in part culturally determined, but is highly individualized. Both parents are powerful influences and role models for the child's ego ideal. In the process of ego ideal

development, the child incorporates parental values, parental behavior, and parental ego ideals and expectations. The child abstracts the major characteristics of the parent with whom he or she identifies. From earlier cited research this is typically the parent of the same sex, particularly with regard to educational and occupational choices.

Ego ideal differs from the recently espoused concept of student "self-actualization". The later refers to the fulfillment of ones's potential (a goal commonly stated by the schools). Humanistic psychologists hold that failure to actualize oneself or to fulfill potential causes problems for the student. According to this psychoanalytic view, potential is irrelevant. "A person may have the potential to be an atomic physicist but may have a vastly different ego ideal. Unless he meets the demands of his own ego ideal, he is likely to be angry with himself" (Levinson, p. 12).

Coller concludes upon close inspection of all the definitions of self-concept he reviewed, both sociological and/or psychological, that "self-concept should really be regarded as a generic term for a set of concepts of self that involves aspects of self-evaluation and/or self-description" (p. 15). He subdivides "self-evaluation" into the concepts of "self-appraisal" and "self-regard". In defining self-appraisal he quotes English and English (1958:46), that self-appraisal involves "an explicit valuing of ones's good and bad points"; for self-regard he quotes Wylie (1961:40): "Self-regard is self-esteem, the congruence between self and ideal self, and discrepancies between self and ideal self."

The subcomponents of "self-description" are stated to be "self-image" and "self-awareness". Self-image is defined as: "the self one thinks oneself to be (i.e., one's personality, character, status, body and bodily appearance)." Self-awareness is defined as: "insight into, and understanding of one's own behavior and motives" (Coller, p. 17).

To these two dimensions (evaluation and description) of self-concept, Coller adds two more: phenomenal (conscious), and nonphenomenal (unconscious). Finally, he states that self-concept is not conceived as a "unitary concept". A person does not have only one self-concept. One has self-concept with respect to personal characteristics (e.g., height) or to roles (e.g., student or son), or possibly to different situations (e.g., reading in front of one's peers, as compared to reading in front of a group of parents) (p. 18).

In moving from the theoretical discussion of the definition of self-concept to the research reviewed, we found much to criticize about the instrumentation used in the studies. The instruments typically lacked any evidence of validity or reliability, much less standardization across studies examining the same variable. The most frequently used types of instruments were rating scales, open-ended questionnaires and adjective check lists. Stanwyck and Felker (in Zirkel, 1971:217) reported evidence of differential results according to the self-concept instrument employed. In some studies, self-concept was assessed by evaluations other than those made by the student himself, i.e., teachers, in-class observers, and counselors. Observations made by these external evaluators were found to be subject to observer bias, consequently adding to the inconsistency of results. Zirkel and Greene (in Zirkel, 1971:218) also found ethnic group members to interact significantly with the type of instrument used.

In the studies reviewed, there exists a vast range of research designs. Many studies superficially investigated the interaction between self-concept and achievement, merely noting the relationship between scores on self-concept measures and scores on achievement tests. Other studies performed more detailed analyses. They examined the effects of ethnic background and SES on self-concept, as well as considered how these factors interacted and what was their combined effect on student achievement. These studies documented far

more meaningful correlations between self-concept and achievement, although their results were less conclusive and more often contradictory than those of the more simple correlative studies.

There is an abundance of research which simply identifies the existence of a "consistent, moderate correlation between self-concept and academic achievement" (Leviton, 1975:32). This review focuses on the research which goes beyond concluding that a relationship exists between self-concept and student achievement. The basic questions the research reviewed explore are:

1. Is there a significant relationship between self-concept and student achievement?
2. What factors affect the self-concept, i.e., home, school, child's sex?
3. What is the direction of causality in the relationship of self-concept and achievement?
4. Can the relationship of self-concept and student achievement be influenced so as to improve achievement?

## II.C RELATIONSHIP BETWEEN SELF-CONCEPT AND ACHIEVEMENT AND FACTORS AFFECTING SELF-CONCEPT

In studying the relationship between self-concept and achievement, Bledsoe (1967) found the sex of the student to interact significantly with self-concept and achievement. A random sample of 271 boys and girls in the fourth and sixth grades revealed only low to moderately positive correlations between self-concept and intelligence, and between self-concept and achievement. When these two relationships were re-examined and each sex was analyzed separately, for the boys the correlations of self-concept and intelligence were significant and positive, but for the girls the correlations were not significant. Correlations of achievement and self-concept similarly showed significant and positive results for boys and non-significant results for girls. Bledsoe suggests that due to the girls' greater maturity and understanding of what our culture rewards, they may have rated themselves higher on the self=concept test than they believed was accurate.

The Bledsoe study and analysis is speculative at best. At no time does either the validity of the instrument, nor the economic status of the population surveyed enter into the analysis. It is entirely possible that SES accounts for the difference, but we have no way of knowing in this experiment.

In another study, Campbell (1965) documented the relationship between achievement and self-concept; noting a stronger relationship in boys than in girls (i.e., male underachievers had more negative self-concepts than female underachievers), thereby supporting Bledsoe's (1967) findings, which some of the more recent research does not.

A study conducted by Simon and Simon (1975) investigated the relationship between self-esteem and standardized academic achievement. They report that the differences in significance of achievement and self-esteem correlations for boys and girls are not borne out. Unlike the Bledsoe study (which measured

"self-concept" and not "self-esteem", but nonetheless used the terms interchangeably), this study found positive significant correlations between self-concept and achievement for both boys and girls. The Simon and Simon study "loosely" controlled for SES by using as its population students from a Long Island, New York suburb, thus implying a relatively homogeneous population, although no real controls for SES were used.

II.C.1. Direction of Causality Between Self-Concept and Achievement

While the absence of standardization in methods, instruments and definitions in the self-concept research makes it difficult to draw conclusions as to the significance of the relationship between self-concept and achievement, there is yet another source of confusion or disagreement. The source of this confusion is the issue of "causality". In what direction does the relationship between self-concept and achievement go? To what extent is achievement a function of the student's self-concept, or conversely to what extent is the student's self-concept determined by past performance, i.e., his grades, teachers' attitudes toward him and other related indicators of his achievement? While many studies imply in their analysis a causal relationship, very few confront the question of the direction of causality or attempt to test for it in their research.

The failure to explore the direction of causality is the result of a practical research problem. In order to establish causality, controlled experiments must be employed. Such experiments can be either laboratory experiments or natural experiments. In either case, the researcher should measure the dependent variable before treatment; should apply the treatment (the independent variable or hypothesized cause of the dependent behavior or attitude); and then should measure the dependent variable after the treatment, all the while attempting to minimize any changes in other variables or extraneous factors

which might also affect the dependent variable. Ideally the research should also retain a control group, (the members of which are as closely matched to the experimental group as possible) which is not subject to the treatment. Only under these conditions can the researcher argue convincingly that the treatment has actually caused the change in the dependent variable. Establishing these rigorous experimental conditions, either in the laboratory or through statistical controls of a natural situation, can be both difficult and expensive.

Experimental research of this kind is notably absent from the self-concept literature, as it is from much educational research. Most studies use correlational techniques based on simultaneous or near-simultaneous measurements of self-concept and achievement. As a result the researchers cannot really say which of the two factors caused the other. Nor can they dismiss the possibility that both self-concept and achievement may have been caused by some third variable which was not considered in the analysis. As a result, the direction of causality cannot be established in many studies. All the researchers can say is that there is an association or relationship between achievement and self-concept.

The fact that the question of causality remains unanswered does not reduce the importance of what research has been done, but it should serve both as a caveat for the educator or policy maker attempting to utilize the results of that research and as a stimulus to the researchers attempting to investigate these relationships.

### II.C.2. Self-Concept and Its Effect on Achievement

Several studies have, however, considered explicitly the direction of causality between self-concept and achievement. Two studies (Lamy, in Purkey, 1970); Wattenberg and Clifford, 1964) attempted to show that the student's self-concept is the antecedent to the student's achievement though they used

different instruments to assess self-concept, both instruments did use evaluations of self-concept by an observer; both examined the self-concept of kindergartners, and their subsequent reading achievement in the first (Lamy) and second (Wattenberg and Clifford) grades. Wattenberg and Clifford hypothesized that "if the early measures of self-concept were predictive of later reading achievement and had a predictive efficiency beyond that of intelligence tests, then one could surmise that the self-concept had a causal relation to reading achievement; if, on the other hand, there was a strong relation between reading achievement and changes in self-concept, one would be inclined to believe that the experiences in reading influenced the self-concept (p. 462). It should be noted that the researchers knew that early achievement in reading had been linked in previous research to the child's sex and SES, so they controlled for this effectively. The results of the Wattenberg and Clifford study showed that the self-concept in kindergarten (N=128) predicted subsequent reading achievement in the second grade. Similarly, the Lamy study found that self-concept in kindergarten gave as good a prediction of reading achievement in first grade as intelligence test scores (Purkey, 1970:23).

The findings of these two studies indicate that students come to school in kindergarten or the first grade with significant differences in self-concept, which in turn affect their achievement. A plausible extension of this finding would be that improvements in early self-concept might improve achievement in the early grades. This line of reasoning suggests additional questions for research: 1) What specific factors in the home and early childhood environment affect self-concept? 2) Can any modifications in the home environment be undertaken to promote positive self-concepts? 3) Can the school help improve self-concept?

Of the research reviewed only Brookover, et al.,(1967) directly deal with improving self-concept through modifying the nature of the interaction be-

tween home and school. Their research focuses on parent attitudes. They assumed that parent attitudes are both overtly and covertly transmitted to the child, ultimately reflected in the child's self concept. Brookover, et al., examined the effect of the students' previous school performance on the attitudes parents develop toward the student's ability, and the effect that their attitudes then have upon the student's self-concept formation, and his achievement in school.

The study tested different methods of improving student self-concept. It spanned a period of six years and involved one class of students who were observed as they advanced from the seventh to the twelfth grade. The researchers hypothesized that "academic behavior or school learning is limited by the student's self-concept of his ability in these areas, and that self-concept results from the expectations and evaluations held by significant others as perceived by the student" (p. 8). "Significant others" for these high school students were identified by the researchers as parents and other family members (p. 141). The assumption made was that a change in the student's perception of others' evaluation of his academic ability is a sufficient condition to change his self-concept of his academic ability (SCA) but it is only a necessary and not a sufficient condition to change his level of achievement (p. 12). The researchers did observe that while there were students with high self-concepts achieving at low levels, practically no students with low self-concepts were achieving at high levels (p. 142).

Brookover, et al., experimented with three methods of raising student achievement through self-concept modification. Briefly summarized the methods were:

1) working with the parents, they tried to change the academic expectations and evaluations parents held for their children;

2) using an "expert" who conveyed in a formal manner information to the student which was designed to enhance the student's SCA;

3) trying to "counteract the effect of interaction with parents who held low expectations for their children through interaction with a counselor who had high expectations for the student" (p. 128).

Of these three approaches, only the first one was successful. Low-achieving students whose parents had been counselled, exhibited an improved SCA, and this was reflected in increased student achievement. However, when the experiment was terminated, the positive academic performance did not continue (p. 128).

### II.C.3. Self-Concept, Achievement, and Disadvantaged Urban Students

Our review of the research on self-concept and disadvantaged students has uncovered two general types of studies. The vast bulk of the research falls into the first category; it simply documents the relative self-concept of disadvantaged or minority students, sometimes comparing their self-concepts to the self-concepts of non-minority or non-disadvantaged students. These studies never explore the relationship between self-concept and achievement. The second category of research, of which there are many fewer studies, addresses the relationship of self-concept and achievement among minority students.

Research in the first category, simply describing the self-concepts of minority or disadvantaged students, has, over the years, arrived at varying results and conclusions. The research studies of the mid to late 1960's suggest that minority students, products of disadvantaged environments, come to school thinking less of themselves and have lower academic expectations. The research studies conducted between the late 1960's and the present challenge these findings by presenting contrary evidence. A possible explanation for this evolution in research outcomes is that minority self-concept has improved as a result of the black pride and militant political movements (Zirkel, 1971).

A study by Soares and Soares (1969) found disadvantaged students to have higher self-concepts than advantaged students. They studied two groups of children totalling 514 disadvantaged and advantaged students in grades four

through eight. Each group lived in an economically segregated community and attended neighborhood schools. Disadvantaged children typically lived in low-rent tenements or public housing. Their family income was under $4,000 per year and they went to schools where the ethnic composition was two-thirds black and Puerto Rican, and one-third white. The advantaged students came from homes with family income in excess of $7,000 per year. They lived in owner occupied homes and the composition of the schools was 90% white students and 10% minority students (pp. 34-5). The results of the analysis indicated that the disadvantaged group had higher "self-perceptions" than the advantaged group. Soares and Soares remind us that these schools were "neighborhood" schools, and that the "Coleman report postulated that when Negro pupils became part of an integrated school system their self-concepts diminished" (p. 42). The Soares and Soares results led Purkey (1970:19) to suggest that it is more likely that the factors which influence self-concept are psychologically rather than economically derived.

The findings that the disadvantaged do not have lower self-concept than advantaged students is questioned by Zirkel (1971), who cites Miller and Woock's (1970) criticism of the Soares and Soares study. Miller and Woock attribute the findings of the Soares and Soares study to the definitional problems that relentlessly plague the self-concept research. The criticism is that while it is likely that the disadvantaged may have self-concepts in the "general, global social context" greater than or equal to advantaged students, there is danger in confusing this use of the term with "self-concept of academic achievement (SCA)". SCA refers to behavior in which the student assesses and indicates to himself his ability to achieve in academic tasks as compared with other students engaged in the same task (Brookover, 1967).

Zirkel (1971:212) using the "global" self-concept does note that several studies involving elementary and junior high school students evidenced significantly higher self-concepts for white children than for black children

(Deutsch, 1960; Keller, 1963; Henton, 1964; Lansman, 1968; Long and Henderson, 1968). He contrasts this to the recent studies which report that black students' self-concept were higher, although not significantly, than those of white students (Wilson, 1967; DeBlaissie and Healy 1970; Zirkel and Moses, 1971). Thus suggesting that the studies showing black students to have significant lower self-concepts than white students are in fact dated, and that students probably have been positively affected by the black pride movements.

Lastly, Zirkel and Moses (1971:254) refer to some of the evidence that shows no significant differences between self-concept for black and white students (Coleman, 1966; Gibby and Gibby, 1967; McDaniel, 1967; Schulman, 1968; Scott, 1969).

Several studies have also examined the relative self-concept of minority group students other than blacks. Although the student populations examined in these investigations have not always been urban, their findings are of some interest. Zirkel (1971) refers to the Coleman study (1966) for the most notable findings on Mexican Americans. Here it was established that "the mean self-concept of Mexican American children was significantly lower than the mean self-concept of both Negro and white children." Other researchers, however, have found no significant differences between self-concept of Mexican American and white children (Zirkel, p. 213).

The average self-concept of Puerto Rican students was found to be significantly lower than that of both Negro and white students (Coleman, 1966). Zirkel and Moses (1971) found similar results employing a self-report instrument. Zirkel and Green (1971) report that these significant differences disappeared when an observed report instrument was used (p. 213).

The research on the effect of the integrated versus the segregated school setting on student self-concept reports "mixed" findings (Meketon, 1966; Taylor, 1967; Williams, 1968; Griffin, 1969). Zirkel (1971) notes studies that show no significant difference between the self-concept of black students in

integrated versus segregated schools (Bienvenu, 1968; Williams, 1968; Byars, 1968; Scott, 1969). He also cites some studies which show higher self-concepts for black students of segregated schools (Harootunian, 1968; Soares and Soares, 1969, 1970).

Unfortunately, it is difficult to tell what should be done with the various findings of studies in this first research category. In exploring the relative self-concept of minority or disadvantaged students, these studies seem implicitly to be seeking an explanation for the lower achievement of these students. If self-concept influences achievement in the general population, then (these studies seem to reason) low self-concept could be a plausible explanation for lower average achievement among minority or disadvantaged students. Few studies make this assumption explicit, and fewer still attempt to document or explore it empirically. As they stand, these studies provide little assistance to either the educator or the policy maker.

The studies which actually explore the relationship between self-concept and achievement among minority or disadvantaged students fall in the second category of self-concept research and are few and far between. The two studies we located which addressed this specific question report that positive self-concept does not in-and-of-itself lead to high achievement in the groups of minority students which they examined.

Shipman, et al., (1975), in a study of young low-SES black children found that while their self-reports indicated high motivation and high self-concept of achievement in the first grade, these positive scores were not reflected in the children's reading and math skills. Massey, et al., (1975), in a study of black high school students in San Francisco, found high self-concepts of achievement along with very low achievement scores on standardized tests.

Shipman and her colleagues conclude simply that "while developing positive attitudes may be necessary for school success it is obviously not sufficient" (p. 78).

Massey and his colleagues argue more specifically that the discrepancy between self-concept and actual achievement has its roots in the school itself. In the schools they examined, the researchers found teachers giving good grades for poor work and little effort. The students came to hold inflated self-concepts and inflated self-assessments of effort because the grading system lacked challenging standards and the teachers failed to convey high expectations for student achievement. As long as students came to class and gave minimal effort they "were not likely to get low grades" (p. 16).

The researchers indict the schools studied for failing to provide both a challenging and realistic grading system, accurately reflecting student achievement. They created an environment which allowed low achieving students to delude themselves about their own achievement abilities. A distorted and inflated grading system produced students who were highly confident and satisfied with their academic abilities but who were in fact only minimally productive. Massey, et al., depict this as a form of "institutional racism". While such a system may allow the disadvantaged student to "feel good" in the short run, it also leads to complacency and low motivation, thus leaving the student ill-prepared for a more competitive "real world". Clearly educators should avoid inadvertently creating the type of educational environment described by Massey, et al.

Two studies provide little basis for any valid generalization in this area. The research suggests that "too high" self-concept may depress rather than encourage achievement by leaving the student over-confident and poorly motivated. Still more research would be desirable in order to explore the mechanisms through which self-concept influences achievement among minority and disadvantaged students.

## II.C.4 Influence of Performance on Self-Concept Formation

Much of the research that we have reviewed has assumed that achievement is a function of the student's personality; specifically, that the student's self-concept causes certain behaviors or attitudes which in turn either facilitate or act as barriers to achievement. This relationship between self-concept and achievement is, however, more complex and problematic than such a simplistic one-way model of causality would suggest. In fact, it is quite possible that self-concept or other personality variables associated with high or low achievement may develop in response to what occurs in the school or classroom, and in response to the patterns of feedback which the student receives in the classroom.

Unfortunately, only a handful of studies have attempted to examine the impact of the educational environment and its processes on student personality, and more specifically, on self-concept. Gibby and Gibby (1967), and Kifer (1975) have examined this relationship and have hypothesized that students enter school at a given level of self-concept, but subject to the mechanics of the educational system (i.e., grades, teacher attitudes, peer and group attitudes) the student's self-concept changes. Those students who receive positive feedback, or who are "successful" students develop high self-concepts, and those who experience failure develop low self-concepts.

An experiment conducted by Gibby and Gibby attempted to determine what influences student performance, specifically low student performance or failure has upon self-concept formation, and what effect it has on subsequent intellectual achievement. The experiment involved the selection of sixty "bright" and academically "superior" students. They were divided into two classes. One class was the control group, and the other the experimental group. Each class was tested using a type of English grammar exam. Three days later, both classes

were tested again. The experimental group was given slips of paper right before the second test situation indicating that they had failed the first test.

The results of the second test showed that under the "stress of failure", the experimental group performed less effectively, and as shown by self-referent statements, they regarded themselves less highly, and tended to believe they were not as highly regarded by "significant others" in their lives. They also showed a decrease in intellectual productivity. Hence, the study concluded that both self-concept and measured cognitive function reflected the negative effect of failure.

A study by Callison (1974) involving a sample of only twenty-eight students supported the Cibby and Cibby findings. She reports that those students receiving negative feedback on test performance exhibited decreased scores on self-concept measures. However, the students did not exhibit the corollary behavior (i.e., those students given positive feedback did not show a significant increase in subsequent self-concept ratings).

These experiments indicate that stress precipitated by academic failure does have negative effects upon self-concept and subsequent performance. However, neither study tested the time span of this negative effect, other than to report that it was experienced immediately after the students received the negative feedback. Hence, the issue of whether grade failure, and repeated grade failure result in lower academic performance levels over one's educational career has not been satisfactorily addressed by these experiments.

While the experimental studies on self-concept formation and achievement may be few in number and their applicability to the individual's cumulative achievement history dubious, other non-experimental, longitudinal studies are in agreement with the basic premise that "differences in academic self-esteem develop as a reaction to school success and failure rather than acting as a cause of such school performance" (Shipman, et al., 1975: 74). Both the

Kifer (1975) and Shipman, et al., studies emphasize the effect of cumulative academic experiences and the importance of time on the development of a student's self-concept and ultimate academic achievement.

Kifer, in his "quasi-longitudinal" study of personality characteristics and student achievement stresses that it is the "pattern of success or failure and the accumulation of such experiences which is related to the personality characteristics" (p. 207). Kifer sampled 214 second, fourth, sixth and eight grade boys and girls, who were grouped into "successful" or "unsuccessful" categories. Placement in a category was determined by a student being either in the top 20% or bottom 20% of their class. Three instruments were used to measure the dependent variables: the Brookover (1964) measure of self-concept of ability, the Crandal (1965) Intellectual Achievement Responsibility, and the Coopersmith (1965) measure of self-esteem. From the testing Kifer concluded:

1. when students were categorized by grade (i.e., second grade, fourth grade, etc.), all students began with uniformly high measures of self-concept of ability, but unsuccessful students' self-concept scores fell rapidly (p. 197);

2. when class-groups were divided by sex, "unsuccessful" girls (with one exception) scored lower than "unsuccessful" boys on all measures of self-concept across all grade levels;

3. the effect of "home concern" on students, is such that those students who perceive themselves as having experienced a high home concern exhibit higher scores on the personality variable than do students with low concern (Kifer notes that home concern is a particularly noticeable factor in early grades, but in later grades it plays a smaller role as patterns of achievement emerge and become a stronger influence) (p. 201);

4. while no interaction between achievement levels and home concern are evidenced, "there is a main effect: regardless of the level of student-achievement, home concern influences positively the personality characteristics" (p. 203).

Obviously, we have only crossed the threshold of research that could be carried out on self-concept and academic achievement. The research that is available is in an exploratory stage at best. Perhaps our greatest contribution to the reader would be to attempt to summarize and synthesize what we have found

in the research, while focusing on Kifer's conclusions which depict the findings and the direction of the self-concept research.

1. We know that there is a significant correlation between self-concept and achievement, and that self-concept of ability can ultimately limit achievement.

2. We can with some assurance say that recent research reveals that self-concept of disadvantaged blacks is not lower, and in some cases was found to be higher than more advantaged groups. Hence, we cannot attribute aggregate differences in achievement between these groups to differences in self-concept among racial groups.

3. The research "strongly" points to the interrelationship of the personality variable--self-concept, and the school and home environment. The direction of causality remains somewhat of a dilemma. Kifer states:

> The personality dimensions of the learner are concomitants of histories of successful and unsuccessful academic achievement. With success in academic tasks in the school comes positive personality characteristics, with failure comes lower regard for self and abilities. The relationship becomes stronger and more powerful as the success or failure becomes prolonged and as a consistent pattern of accomplishment emerges (p. 205).

With regard to the home environment he states:

> The child who receives support and encouragement from the home not only has a better chance to achieve well but also is more likely to have the positive personality characteristics...home factors are more highly related to personality characteristics in the early school years than in the later ones (p. 206).

We know that positive self-concept alone is not a sufficient condition to produce high academic achievement, but it does contribute to it. Thus, if high self-concept facilitates greater learning, and appears to boost achievement, then surely it is desirable to insure positive development of student self-concept. The unanswered question which the literature should begin to focus on is how can the educational process genuinely facilitate the development of positive self-concept of ability? Although it is not within the purview of the review and analysis, we propose that educational strategies which facilitate the de-

velopment of positive self-concept include:

a. greater sensitivity among school staff (i.e., teachers, administrators, counsellors) to individual student's cognitive and emotional needs;

b. diagnostic procedures to determine which students possess low self-concepts, particularly upon initial entry into the school, where individual student self-concept has been shown to have its greatest influence;

c. student exposure to experiences that include intensive and extensive conditions of success, although it is clear that success itself is not enough--that it is the duration of the experiences of success which is important (while the research indicates that boosting self-concept through positive educational experiences would positively affect achievement, the danger of applying this to educational policy without simultaneously addressing real cognitive developmental needs of the students is an extreme disservice, as suggested by Massey);

d. parental counselling--"consciousness raising", making parents more aware of the ways to nurture positive self-concept development in their children.

## SUMMARY AND CONCLUSIONS

Of the research reviewed, the variables generally purported to be significantly related to student achievement across socioeconomic groups were: socioeconomic status, pre-school home environment, and factors that reflect the degree to which cognitive development is promoted in the home: 1. parental stress on language development, 2. the extent to which parents create situations for learning in the home, 3. the promotion of learning activities, 4. the exposure to cognitive material, and 5. the existence of a reading model. Other variables bearing a significant relationship to achievement include: residential mobility, birth order, family size, and the personality variable self-concept.

Although significant relationships have been found between these variables and student achievement, this review finds frequent contradictions in results. The disparities can most often be linked to the shortcomings in research design and/or failure to adequately control for variables, e.g., socioeconomic status and sex. As an example, the research reports a relationship between student achievement, parent education and occupation (two measures of socioeconomic status), but research on minority groups indicates that these socioeconomic variables are not good predictors of achievement for minority group children.

Studies which simply correlate socioeconomic status and achievement obtain much less unequivocal results when they control for other variables. The bulk of the research done on socioeconomic status shows that it correlates strongly with achievement--as a group, children who come from homes where parent occupation and education levels are low score lower on achievement tests and earn lower grade point averages than do children from high socioeconomic backgrounds. However, research which focused on minority groups found that as the range of income in the sample narrows, as it does when minority groups are examined, the predictive value of SES appears to decrease. Thus, the research concludes that

it is not simply the incidence of higher parent education or occupation levels that account for greater academic achievement, but rather more specific factors ot the family's "interactive behavior" and the "cognitive climate of the home": the amount of parental time spent with the child, the degree to which learning experiences are created in the home, parental expectation for intellectual achievement, and parental awareness of and information on the child's development.

The research on "family interactive behavior" and "cognitive climate of the home" clearly suggests that child-rearing practices play an enormous role in the future academic performance of the student, and strongly affect the child's educational goals. While it may not be politically or socially feasible for educators to direct major policy suggestions at the home environment, information derived from the research on home environment should be conveyed to parents of pre-school and school age children in order to increase the liklihood of the child's later school success. It is clear from the research that engaging in activities such as: counting, reciting the ABC's, reading to children, exposing children to varied learning situations, and creating situations designed to increase verbal exchanges contribute measurably to the child's later school success. Such information on child raising can be communicated to parents through the media, high school courses, pre-natal instruction, adult education classes, and direct parent counselling. In short, attention must be drawn to the importance of establishing a suitable home learning environment for all children.

Other inconsistencies in the research are revealed in the studies conducted on family relationships. Most of the literature shows no significant relationship between family "intactness" or parental arrangement and student achievement. However, most of these studies also fail to adequately consider the effect of variables such as: the length of time parents have been separated, whether or not a parent "substitute" exists, the age of the child at the time of separation, or the socioeconomic background of the family. So, while the weight

of evidence suggests that father absence does not affect achievement significantly, these shortcomings in the research do not allow us to say so unequivocally.

Studies on birth order and its effect upon achievement show significant family size and birth order interactions, with first born children doing best in larger families. Other studies, specifically ones that control for socio-economic status, find that first born children in low income families do less well in school than later born children. The research suggests that this is perhaps a function of increased child-caring responsibilities and decreased emphasis on academics for the eldest child of a large, low income family. Interestingly, studies also show that regardless of birth order or race, pre-school children from large low income families score lower on verbal ability tests than low income children from small families. But, these studies did not control for the "spacing" of the children, a factor which appears to be directly related to parental interaction with the child.

One variable researched, which we reviewed, that appears to have direct policy implications for education was "residential mobility". Studies on this variable show that low income urban students who are subjected to frequent moves exhibit significantly lower reading scores than students of comparable backgrounds who remain in the same school over the course of their education. The fact that geographic moves by middle income students do not similarly result in lower achievement suggests that this is a specific problem of low income urban schools, and one that may quite possibly contribute to the lower achievement levels found in New Jersey's urban schools.

Certainly the magnitude of the residental mobility problem as it has been found to apply to the achievement level of New York City school children warrants investigation for its applicability to New Jersey's urban school districts. The degree and effect of this transience should be documented. Possibly, increased efforts should be targeted toward the needs of high mobility inner-city students:

e.g., increased counselling, supplemental education, or flexible school boundaries allowing a student to continue in attendance, considering the distance travelled.

The research on student self-concept lends itself to many policy suggestions, but these should be approached with the utmost caution. The research studies report that students with high self-concept tend to perform better in school than students with low self-concept. Raising the opinions which significant others, specifically parents, hold of the student's ability can, at least temporarily, improve the student's self-concept. Such an improvement in self-concept can be an important component in subsequent improvement of the student's achievement. Yet recent researchers, who have found the self-concept of black students to be equal or higher than white students, report that black students with high self-concepts are not achieving high cognitive performance.

The research has responded to this condition of high self-concept and low cognitive achievement by stating that positive self-concept alone is not a sufficient condition to produce high cognitive achievement, although it does contribute to it. Some researchers have also indicted the urban schools for "inflating grades" and thus allowing students to develop high self-concepts without experiencing real cognitive development. Thus, the policy of "self-concept boosting programs" for the express purpose of bringing about an increase in student achievement is very dubious. As it was stressed in the body of this review, unless the real needs of students in the area of cognitive development are simultaneously considered an extreme disservice is done to the student.

The obvious unanswered question is "how can the educational process genuinely facilitate positive self-concept development and simultaneously attend to the cognitive development needs of the student?" In response, recent researchers have again directed their attention to the home environment. Although the researchers have not found an independent-dependent variable relationship between "home concern" and self-concept, they do report that the home environment does

influence self-concept. Several researchers report that through a parent counselling program they were able to raise the self-concept of the students, and simultaneously increase their academic performance. The increase in achievement and self-concept was temporary, lasting only as long as the parent counselling was in effect.

A second response to this difficult question has been to expose the student to intensive and extensive experiences of success and real cognitive development in the school environment. Unfortunately, at present this has only been an often discussed possibility, unaccompanied by any substantive strategies for carrying it out. Thus the problem of raising self-concept and achievement remains, for the most part the subject of future researchers, and the challenge of present day practitioners.

The research reviewed in this report suggests that student achievement is the complex result of many interrelated factors, of which ability is only one. If urban educators are intent upon raising their students' cognitive development, then such non-cognitive student variables as: pre-school experience, home environment, geographic transience, individual personality, parental involvement, socio-economic status, race, sex, family size, birth order and spacing must be considered in prescribing student learning strategies.

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